REMARKS

Claims 1-32 are presently pending in the application. Applicants add new claim 32, as listed above. Support for the new claim can be found in the original claims and throughout the remainder of the specification. The application is believed to be in condition for allowance. Hence, reconsideration and allowance are respectfully requested.

The Examiner indicates that the preliminary amendment filed on 1/5/2001 has not been entered because the phrase "Ethernet network 32" was not found on pages 78 and 79 as mentioned in the amendment. In response, Applicants note that the phrase "central processor 12 over Ethernet network" is found on page 76, lines 19-20, and the phrase "control and data over Ethernet" is found on page 77, line 3. The proposed amendments to the specification presented in the preliminary amendment of January 1, 2001, are now listed in the above amendments to the specification with correct page and line numbers.

With respect to the amendments to the drawing presented in the above preliminary amendment, Applicants respectfully request these changes be entered.

The objections to the specification raised by the Examiner, including the objection to the length of the abstract, are addressed by providing the above amendments to the specification. In addition to copy of each amended paragraph, a marked-up versions of each replacement paragraph is also provided.

Information Disclosure Statement

In response to the objections raised with regards to the previously filed information disclosure statement (IDS), Applicants will file an updated IDS shortly after filing the present response.

Rejections under 35 U.S.C. § 112

The Office Action rejects claim 1 and 23 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Applicants respectfully traverse these rejections for the following reasons. The specification provides adequate enablement for the

features of claims 1 and 23. For example, it teaches that a usage data server (UDS) a usage data monitoring library (UDML) and an FTP client, can be employed to implement the claimed methods (see, *specification p. 77-88*). For example, on page 79 at lines 19-26, it recites:

> The UDML includes a polling timer to cause each driver to periodically poll its hardware for "current" statistical/accounting data samples 411a. The current data samples are typically gathered on a frequent interval of, for example, 15 minutes, as specified by the polling timer. The UDML also causes each driver to put the binary data in a particular format, time stamp the data and store the current data sample locally. When a current data sample for each interface managed by the device driver and corresponding to a particular string name is stored locally, the UDML packages all of the current data samples corresponding to the same string name into one or more packets containing binary data and sends the packets to the UDS with the registered string name.

Furthermore, on page 79 at lines 28-31, the specificatioin recites:

> The UDML clears the data summary periodically, for example, every twenty-four hours, and then adds newly gathered current data samples to the cleared data summary. Thus, the data summary represents an accumulation of current data samples gathered over the period (e.g., 24 hours).

With regard to terminating transmission of current statistical data upon detecting a predetermined condition while continuing transmission of summary data, albeit at a different rate, the specification provides the following teachings on page 83 at lines 11-21:

> If FTP client 412b cannot send data from hard drive 421 to file system 425 for a predetermined period of time, for example, 15 minutes, the FTP client may notify the UDS and the UDS may notify each UDML. Each UDML then continues to cause the device driver to gather current statistical management data samples and add them to the data summaries at the same periodic interval (i.e., current data interval, e.g., 15 minutes), however, the UDML stops sending the current data samples to the UDS. Instead, the

> UDML sends only the data summaries to the UDS but at the more frequent current data interval (e.g., 15 minutes) instead of the longer time period (e.g., 6 to 12 hours). The UDS may then update the data summaries stored in hard drive 421 and cease collecting and storing current data samples. This will save space in the hard drive and minimize any data loss.

The specification also provides further teachings in addition to the ones above that fully enable the claims in the application.

Rejections under 35 U.S.C. § 102

The Office Action rejects claim 1, 4, 11-16, 23-25, and 29-31 as being anticipated by U.S. Patent No. 6,108,782 of Fletcher.

Claim 1 recites a method of managing distributed statistical data retrieval in a network device that includes sending a first current statistical data sample from a first card to a central process within the network device periodically at a first period, and sending a first data summary from the first card to the central process periodically at a second period. Upon detecting a predetermined condition, the first data summary is sent from the first card to the central process periodically at the first period, and the first current statistical data sample is ceased to be sent from the first card to the central process periodically at the first period.

Fletcher describes a method for distributed remote monitoring of network traffic that includes gathering network statistical data from a plurality of network nodes by employing agents executing on these nodes, and transmitting the data to a collector. The collector can compile the received data and report network performance data, based on the compiled statistical data, to a network management system.

Unlike claim 1, Fletcher fails to teach or suggest sending a data summary corresponding to current statistical data from the agents to the collector, much less sending such summary data at a selected periodic rate. In addition, Fletcher does not teach terminating transmission of current statistical data to a central process, such as the collector, and modifying the periodic rate at which the summary data is sent upon detection of a predetermined condition. In particular,

Fletcher does not teach modifying the periodic rate at which the summary data is transmitted from a "second" period (the rate utilized for transmission of summary data before detection of the condition) to a "first" period (the rate utilized for transmission of current statistical data before detection of the condition), as recited in claim 1. Hence, Fletcher does not provide all the features of claim 1, and their concomitant advantages. For example, the method of claim 1 allows throttling data transmission to the central process when a predetermined condition, such as the inability of an FTTP client to send data from a hard drive to a file system, occurs.

Accordingly, claim 1, and claims 4, and 11-16, that depend on claim 1, are patentable over Fletcher.

Claim 23 recites a method of managing distributed statistical data retrieval in a network device that includes sending current statistical data samples from each of a plurality of cards to a central process within the network device periodically at a first period, and sending data summaries from each of the cards to the central process periodically at a second period. Upon detecting a predetermined condition, the data summaries are sent from each of the cards to the central process periodically at the first period, and the current statistical data samples are ceased to be sent from each of the cards to the central process.

The reasoning provided above with respect to claim 1 apply with equal force to establish that claim 23 is also patentable. In particular, similar to claim 1, claim 23 recites, among other steps, terminating transmission of current statistical data to the central process and modifying the duration of a periodic interval (period) at which the summary data is transmitted.

Claim 24, 25, and 29-31 depend on claim 23, and hence, are also patentable.

Rejections under 35 U.S.C. § 103

The Office Action rejects claims 2-3, 5-10, 17-22, and 26-28 as being unpatentable over Fletcher.

Claim 2, 3, 5-10, and 17-22 depend on independent claim 1, and claims 26-28 depend on independent claim 23. As discussed in detail above, Fletcher fails to teach or even suggest salient features of claims 1 and 23, and consequently the features of those claims that depend on them. In other words, Fletcher does not teach or even suggest all of the features of claim 2-3, 5-10, 17-22, and 26-28. Accordingly, withdrawal of the obviousness rejections are respectfully requested.

New Claim

New claim 32 recites a method of managing distributed statistical data retrieval in a network device, comprising periodically sending current statistical data generated by a process executing on a card of the network device to a central process within the network device at a first transmission rate, and periodically sending data summary corresponding to the current statistical data to the central process at a second transmission rate that is lower than the first transmission rate. Upon detection of a predetermined condition, the transmission of the current statistical data is terminated, and the data summary is transmitted at the first transmission rate, rather than the second transmission rate, while the condition persists.

Support for this claim can be found in the original claims and throughout the specification. Thus, no new matter is added.

The arguments presented above apply with equal force to establish that this claim is also patentable over Fletcher. In particular, this claim recites terminating transmission of current statistical data upon detection of a predetermined condition while continuing transmission of the data summary, albeit at a higher rate – features not taught by Fletcher.

Conclusion

In view of the above amendments and remarks, Applicant respectfully request reconsideration and allowance of the application. If there are any remaining questions, the Examiner is invited to call the undersigned at 617-439-2514.

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Respectfully submitted,

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Marked up version of replacement paragraph beginning at line 16 on page 76

-- Referring to Fig. 13b, as described above, a user / network administrator of computer system 10 works with network management system (NMS) software 60 to configure computer system 10. In the embodiment described below, NMS 60 runs on a personal computer or workstation 62 and communicates with central processor 12 over Ethernet network ~~32~~ 41 (out-of-band). Instead, the NMS may communicate with central processor 12 over data path 34 (Fig. 1, in-band). Alternatively (or in addition as a back-up communication port), a user may communicate with computer system 10 through a console interface / terminal (840, Fig. 2a) connected to a serial line 66 connecting to the data or control path using a command line interface (CLI) protocol. Instead, NMS 60 could run directly on computer system 10 provided computer system 10 has an input mechanism for the user. --

Marked up version of replacement paragraph beginning at line 3 page 77

-- The NMS and central processor 12 pass control and data over Ethernet ~~32~~ 41 using, for example, the Java Database Connectivity (JDBC) protocol. Use of the JDBC protocol allows the NMS to communicate with the configuration database in the same manner that it communicates with its own internal storage mechanisms, including the NMS database. Changes made to the configuration database are passed to the NMS database to ensure that both databases store the same data. This synchronization process is much more efficient, less error-prone and timely than older methods that require the NMS to periodically poll the network device to determine whether configuration changes have been made. In these systems, NMS polling is unnecessary and wasteful if the configuration has not been changed. Additionally, if a configuration change is made through some other means, for example, a command line interface, and not through the NMS, the NMS will not be updated until the next poll, and if the network device crashes prior to the NMS poll, then the configuration change will be lost. In computer system 10, however, command line interface changes made to configuration database 42 are passed immediately to the NMS database through the active query feature ensuring that the

NMS, through both the configuration database and NMS database, is immediately aware of any configuration changes. --

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